What is claimed is:

1. An ac generator for a vehicle comprising:

a rotor having field windings,

a stator including a stator core arranged opposed to the rotor and an electrical conductor wound on the stator core, and

a housing supporting the rotor and the stator, wherein the stator core is constituted by laminated core having a plurality of slots each extending to an axial direction, the electrical conductor is comprised of a slot-in portion located in the slots and a cross-over portion connecting each of the slot-in portions at the shaft end side of the stator, wherein the conductor of the slot-in portion located in the slots is substantially rectangular in its cross-sectional profile and the conductor of the cross-over portion is substantially circular in its cross-sectional profile, and at least longer side portion of the conductor of the slot-in portion located in the slots has an insulation coating of which thickness is smaller than that of insulation coating in the cross-over portion.

2. An ac generator for a vehicle of claim 1, wherein a conductor of the slot-in portion located in the slots is a substantially rectangular in cross section a shorter side

thereof being in the radial direction of the generator and a longer side thereof being in the circumferential direction of the generator.

3. An ac generator for a vehicle of claim 1, wherein a conductor of the slot-in portion located in the slots is a substantially rectangular in cross section a shorter side thereof being in the circumferential direction of the generator and a longer side thereof being in the radial direction of the generator.

4. An ac generator for a vehicle of claim 2, wherein a conductor of the slot-in portion located in the slots is closely disposed on a line to the radial direction.

5. An ac generator for a vehicle of claim 2, wherein a conductor of the slot-in portion located in the slot is closely disposed on plural lines to the radial direction.

6. An ac generator for a vehicle of claim 1, wherein a conductor of the slot-in portion located in the slot is impregnated with insulating resins.

7. An ac generator for a vehicle of claim 1, wherein the periphery of the cross-over portion is protected by the housing

and the laminated core is directly held by the housing made of metal.

8. An ac generator for a vehicle of claim 7, wherein the periphery of the housing is provided with a plurality of ribs and charging air holes or discharging air holes formed between the ribs.